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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,599	10/03/2003	Robert C. Lam	01239/01092	6145

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PATENT DEPARTMENT
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EXAMINER	
SPERTY, ARDEN B	

ART UNIT	PAPER NUMBER
1771	

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/678,599	LAM ET AL.	
	Examiner	Art Unit	
	Arden B. Sperty	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-20* is/are pending in the application.

4a) Of the above claim(s) *20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

NON-FINAL OFFICE ACTION

1. Applicant's amendments and remarks, 10/27/2005, have been entered and carefully considered.

Claim Rejections - 35 USC § 112

2. Claims 4-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 4-5 depend from a claim that has been canceled. Since the limitations of canceled claim 3 have been incorporated into claim 1, it is reasonable to presume that claims 4-5, which previously depended from claim 3, are intended to be dependent from claim 1. The claims are interpreted as such, but are rejected under 35 USC 112, second paragraph, as being indefinite because this interpretation has not been confirmed. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. Claims 1-2, 6 and 8-13 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5998307 to Lam et al.

4. The reference teaches fibrous base material, the primary layer comprising aramid fibers (see Example 24, column 31), and the secondary layer comprising carbon particles in an amount of 0.2 to 20% (col. 30, lines 11-17). The carbon particles are adhered in the binder present in the primary layer (col. 29, line 66- col. 30, line 3). The

area of coverage of carbon particles on the primary layer surface is in the range of about 3 to about 90% (col. 30, lines 15-17). The exposed surface area of the primary layer is thus within the range of about 10 to about 97%. The exposed surface area includes the components of the primary layer. Silica particles are a component of the primary layer, and are thus exposed in the 10 to about 97% surface area between the carbon particles adhered by the binder of the primary layer. The aramid fibers have a CSF of greater than 450 and a fiber length of about 0.5 to 6 mm (col. 8, lines 51-55).The carbon particles have a size of about 0.5 to about 80μ (col. 29, lines 50-55). The porosity of the primary layer is described at column 8, lines 49-51 as having a pore diameter of from about 2.0 to 15 microns. Air voids of at least about 50% are taught at column 11, lines 5-8. The primary layer further comprises a filler, such as diatomaceous earth (col. 9, lines 47-49).

5. Claims 1-4, 6-13, and 16-18 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter. See comments below regarding insufficiency of, and questions raised by, the declaration under 37 CFR 1.132.

6. US Patent 6630416 to Lam et al. teaches the following:

7. Regarding claims 1-2, 4, and 6-7, the reference teaches a fibrous base material, having a primary fibrous layer and secondary friction-modifying particulate layer, impregnated with a resin. The friction modifying particles include silica particles, carbon powders, and other materials. The particles range in size from about 0.5 to about 80

microns. The particles are present in an amount of about 0.2 to about 20%, and cover about 3 to about 90% of the base material surface layer. See col. 9, lines 1-35.

8. Regarding claims 8-13, 16-18,the fibrous base material may comprise less fibrillated aramid fibers, carbon fibers (col. 7, lines 33-34), cotton fibers (col. 8, lines 45-50), graphite particles (col. 3, lines 13-18), and fillers such as diatomaceous earth (col. 8, lines 38-44). The aramid fibers have a length of from about 0.5 to 10 mm and a CSF of greater than about 300 (col. 8, lines 10-18). The pores of the base material range in size from about 2.0 to 25 microns in diameter, and there are readily available air voids of at least about 50% (col. 7, lines 53-60).

Claim Rejections - 35 USC § 103

9. Claims 5, 14, 15, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6630416 to Lam et al as applied under 35 USC 102(f) to claim 1 above.

10. Regarding claim 5, although the '416 reference teaches silica and carbon particles as friction modifying particles, the reference is silent with respect to the amount of each. It would have been necessary for one of ordinary skill in the art to determine the optimal amounts. Therefore, absent a showing of unexpected results with the specifically claimed amounts, no patentable distinction is seen between the claimed invention and what would have been obvious to one of ordinary skill in the art.

11. Regarding claims 14 and 19, while the '416 reference teaches the structure as stated above, the reference is silent with respect to the amount of graphite particles.

Absent a showing of unexpected results, it would have been obvious to one of ordinary skill in the art to determine the optimal workable ranges for the material, and such a determination would not require undue experimentation.

12. Regarding claim 15, the reference teaches resin impregnation of about 45 to 65%, by weight, of the friction material. The reference further teaches the resin compositions of the claim. The difference between the claimed amount and the disclosed amount of resin impregnation is slight, and it is reasonably presumed that the optimal amount, which would be determined by one of ordinary skill in the art, would overlap the claimed range without a patentable difference. Absent a showing of unexpected results with the specific amounts, the position remains that the effects of varying the amount of resin impregnation are predictable and obvious to one of ordinary skill in the art.

Double Patenting

13. Claims 1-2, and 4-19 are directed to the same invention as that of claim 5 of commonly assigned Patent 6630416. The issue of priority under 35 U.S.C. 102(f) of this single invention must be resolved.

The assignee is required to state which entity is the prior inventor of the conflicting subject matter. A terminal disclaimer has no effect in this situation since the basis for refusing more than one patent is priority of invention under 35 U.S.C. 102(f) or (g) and not an extension of monopoly.

Failure to comply with this requirement will result in a holding of abandonment of this application.

Response to Arguments and Declaration

14. Applicant's arguments against US Patent 5998307 are unpersuasive. As stated above in the rejection under 35 USC 102(b), the area of coverage of carbon particles on the primary layer surface is in the range of about 3 to about 90% (col. 30, lines 15-17). The exposed surface area of the primary layer is thus within the range of about 10 to about 97%. The exposed surface area includes the components of the primary layer. Silica particles are a component of the primary layer, and are thus exposed in the 10 to about 97% surface area between the carbon particles adhered by the binder of the primary layer.

15. The declaration submitted under 37 CFR 1.132 is insufficient to overcome the holding of US Patent 6630416 as prior art. There are two inventors named on US Patent 6630416, while there are three named in the present application. The currently filed declaration under 37 CFR 1.132 states that any invention disclosed in US Patent 6630416 was invented by the co-inventors of that patent. The presently claimed invention is disclosed and claimed in US Patent 6630416, therefore according to Applicant's declaration, the presently claimed invention was invented by the inventors on US Patent 6630416, NOT the inventors listed on the presently pending application. Applicant's comments state otherwise; Applicant's comments assert that the claimed subject matter is NOT the invention of another. Therefore Applicant's comments

disagree with the declaration. For these reasons, the declaration does not meet Applicant's burden to show who invented the presently claimed invention.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arden B. Sperty whose telephone number is (571)272-1543. The examiner can normally be reached on M-Th, 08:00-16:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571)272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Arden B. Sperty
Examiner
Art Unit 1771

January 22, 2006

TERREL MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700